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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,272	04/19/2001	Cecil Chang	BHT-3183-13	7889

7590 03/28/2002
DOUGHERTY & TROXELL
5205 LEESBURG PIKE, SUITE 1404
FALLS CHURCH, VA 22041

EXAMINER

CRUZ, LOURDES C

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 03/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,272

Applicant(s)

CHANG ET AL.

Examiner

Lourdes C. Cruz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: The specification contains errors. See, for example, page 3, line 12 wherein "encapsulating" is disclosed in place of encapsulating.

Appropriate correction is required.

Claim Objections

Claims 1 and 3 are objected to because of the following informalities: These claims contain grammatical errors. See claim 1, line 3 wherein "being from inside to outside divided into..." seems to have syntax errors. Also see that claim 3 recites "a epoxy compound" in place of an epoxy compound. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1: The claim recites “the top”, “the bottom”, “the corresponding” leads of the upper chip, and “the corresponding” leads of the bottom chip. These phrases above lack antecedent basis
- Claims 4 and 5: The claims recite “a plurality of leads” while a plurality of leads have already been defined above. It is unclear whether Applicant is further introducing a plurality of leads or if Applicant is referring to the same plurality defined in claim 1. Such indefinite terminology has made the claims confusing to the examiner, who has examined these claims as best understood. Additionally, the claims recite “the same plane”. These terms lack antecedent basis in the claims.
- Claim 6: The claim recites “the other” leads. This term lacks antecedent basis. Also, the claim further recites “a supporting portion”, which has rendered the claim indefinite for such structural limitation has already been defined in claim 1. It is suggested that terms such as first, second, third... supporting portion are used to better draft the claims.

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See that the claims in the Application have multiple 112-second paragraph problems of indefiniteness. Such problems have made the claims confusing to the examiner. Find rejection below, which has been applied to the claims as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Masuda et al. (US 6252299).

Masuda et al. discloses a double-sided chip package (See Fig. 3) comprising:

- A LOC lead frame having a plurality of leads wherein each lead is divided into a supporting portion 3A1, an inner connecting portion 3A and an outer connecting portion A9; an upper chip 1(1A) having a plurality of bonding pads (connected to wires 7, inherently present under such) on its upper surface and being fixed to the top of the

supporting portions of the leads with its bottom surface; a bottom chip 1(1B) having a plurality of bonding pads and being fixed to the bottom of the supporting portions of the leads with its top surface; a plurality of bonding wires 7 electrically connecting the bonding pads of the upper chip to the inner portion of the corresponding leads, and the bonding pads of the bottom chip to the inner connecting portions of the corresponding leads, respectively; and a package body 8 sealing the upper chip, the bottom chip, the bonding wires, the supporting portions and the inner connecting portions of the leads.

- Claim 2: The package of 1 further comprising tapes 6 fixing the upper chip and the bottom chip to the supporting portions of the leads
- Claim 3: The package of 1 further comprising an epoxy compound 6 fixing the upper chip on the supporting portions of the leads
- Claim 4: wherein the supporting portions and the inner connecting portions of a plurality of leads 3A2 (comprising 3A1 and 3A) are on the same plane
- Claim 5: wherein the supporting portions and the inner connecting portions of a plurality of leads 3B1 are formed on the same plane with equal distance to the upper and the bottom chips

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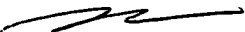
- Claim 6: the package of 1 wherein the LOC lead frame additionally includes at least a power lead 5 comprising a supporting portion (4) sandwiched between upper and bottom chips and is perpendicular to the supporting portion of other leads

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lourdes C. Cruz whose telephone number is 703-306-5691. The examiner can normally be reached on M-F 10:00- 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Lourdes C. Cruz
Examiner
Art Unit 2827



Lourdes Cruz
March 20, 2002



Jerome Jackson, Jr.
Primary Examiner